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| **Course:** Physics I A | **Period:** | **Time Allotment:** 1 day |
| **Unit:** Kinematics | **Lesson:** Graphical Analysis of Motion | |
| **Lesson Goal(s):**  Students will be able to:   * Differentiate between displacement, velocity, and acceleration * Predict the graph of the motion of an object * Explain the use of a negative sign to indicate direction in vector quantities * Use a motion graph to describe the motion of an object * Determine the slope of a graph and use that information to determine the velocity or acceleration of an object | | |
| **GSE/Content Standards:**  **PS3 (9-11)- 8**  **Students demonstrate an understanding of forces and motion by…**  **8b** using modeling, illustrating, graphing explain how distance and velocity change over time for a free falling object. | | |
| **Materials:**  GLX  Motion Sensor  Textbook  Worksheet | | |
| **Agenda:**  Intro  Demo  Pass out Worksheets  Activity  Report out Results  Closure | | |
| **Instructional Procedures:**  **Opening:**  Board work: What is the difference between distance and displacement?  What is the difference between speed and velocity?  What is the difference between velocity and acceleration?  Discuss answers  Introduce topic of graphical analysis and its importance to both NECAP and science in general  Demo the equipment  **Engagement:**  Pass out worksheet  Explain the directions  Break students into groups  Students will complete worksheets  Students will trace results onto overhead  Results will be compared  **Closure:**  Students will write a quick guide for next years students to help them predict and understand the graphs | | |
| **Homework:**  Problem set that involves analysis of graphs | | |
| **Assessment: Formative/Summative** | | |
| **Reflection:** | | |